ELSEVIER

Volume 95, Numbers 1–3, 15 October 1999

Journal of
Materials
Processing
Technology

www.elsevier.com/locate/jmatprotec

Contents

Analysis of grinding quantities through chip sizes 1
P.-L. Tso, S.-H. Wu

Some comments on implosion and Brown gas 8
H.-K. Oh

The influence of atmospheric humidity on the friction and wear of carbon steels 10
H.-K. Oh, K.-H. Yeon, H. Yun Kim

FEM simulation of orthogonal cutting: serrated chip formation 17
E. Ceretti, M. Lucchi, T. Altan

The control of the chemical composition, microstructure and mechanical properties of beinite ductile iron for liner plates 27
W. Zhao, G. Wang

Machinability assessment of inconel 718 by factorial design of experiment coupled with response surface methodology. 30
I.A. Choudhury, M.A. El-Baradie

Fatigue in cold-forging dies: tool life analysis 40
P. Skov-Hansen, N. Bay, J. Grønbæk, P. Brøndsted

A method for comparing the performance of low-cost press tools for sheet forming 49
D. Cartwright, P.R. Drake, M.J. Godwin

Three-dimensional analysis of the stress–strain state in the process of plastic deformation of metals 55
V.L. Kolmogorov, V.P. Fedotov, A.V. Gorshkov

Study on the microstructure and formability of commercially pure titanium in two-temperature deep drawing. 65
J.-M. Liu, S.-S. Chou

Development of a new pressure sensor and its application to the measurement of contacting stress in extrusion. 71
T. Yoneyama

A study of the active vibration control of a cutting tool. 78
J.L. Jang, Y.S. Tarng

High-speed end milling of an articulated robot and its characteristics 83
S.-i. Matsuoka, K. Shimizu, N. Yamazaki, Y. Oki

Optimization of turning operations with multiple performance characteristics 90
C.Y. Nian, W.H. Yang, Y.S. Tarng

Contributory study on error estimation in measurements of stress distributions on the contact surface for plastically deformed metal. 97
J. Mischke, A. Świątoniowski, A. Pietrzykowski, P. Sobkowiak

A fibre-optic surface-roughness sensor 107
U. Persson

A three-dimensional rigid–plastic FEM analysis of rotary forging deformation of a ring workpiece 112
W. Guangchun, Z. Guoqun

The application of some criteria for ductile fracture to the prediction of the forming limit of sheet metals 116
H. Takuda, K. Mori, N. Hatta

Application of continuum damage theory in metalforming processes. 122
M. Elgueta, C. Cortés

The effect of annealing on improving the quality of lead zirconate titanate thin films on $Pt/SiO_2/Si$ substrates 128
C.C. Chang, P.C. Lu

Machining of alumina green bodies and their dewaxing 133
T. Besshi, T. Sato, I. Tsutsui

Elsevier Science S.A.

An investigation into the rolling process of copper tubes 139
R. José Montecinos, E.S. Arauco

Experimental investigations into electrochemical discharge machining (ECDM) of non-conductive ceramic materials 145
B. Bhattacharyya, B.N. Doloi, S.K. Sorkhel

Computer aided process design in cold-former forging using a forging simulator and a commercial CAD software 155
C.S. Im, S.R. Suh, M.C. Lee, J.H. Kim, M.S. Joun

CO_2 laser cutting of metallic coated sheet steels 164
J. Wang, W.C.K. Wong

Rapid prototyping and manufacturing technology applied to the forming of spherical gear sets with skew axes 169
Y.-C. Tsai, W.-K. Jehng

An investigation of the corrosion–abrasion wear behavior of 6% chromium martensitic cast steel 180
L. Zhenlin, R. Qichang, J. Zhihao

Hardness–stress–strain correlation in titanium open die extrusion: an alternative to visioplasticity 185
K. Srinivasan, P. Venugopal

Robotic polishing of free-form surfaces using scanning paths 191
H.y. Tam, O. Chi-hang Lui and A.C.K. Mot

Precision sintering of slip cast components 201
C. Ainsley, H. Gong

The effects of SiC particle volume fraction on the microstructure and hot workability of SiCp/AA 2024 composites 210
B.-C. Ko, G.-S. Park, Y.-C. Yoo

Simulation of the cold-roll forming of circular tubes 216
G. Nefussi, L. Proslier, P. Gilormini

The machining characteristics of Al_2O_3/6061Al composite using rotary electro-discharge machining with a tube electrode . . . 222
B. Hwa Yan, C. Chung Wang

Research on prediction of the processing parameters of liquid extrusion by BP network 232
L.H. Qi, J.J. Hou, P.L. Cui and H.J. Li

Residual stresses in ground components caused by coupled thermal and mechanical plastic deformation 238
M. Mahdi and L.C. Zhang

Prediction and comparison of the area of the heat-affected zone for the bead-on-plate and bead-on-joint in submerged arc welding of pipes 246
V. Gunaraj, N. Murugan

An expert system for cold forging process design based on a depth-first search 262
H.-S. Kim and Y.-T. Im

Author Index 275
Subject Index 277

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request.

CONTENTS direct

This journal is part of **ContentsDirect**, the ***free*** alerting service which sends tables of contents by e-mail for Elsevier Science books and journals. You can register for **ContentsDirect** online at: **www.elsevier.nl/locate/contentsdirect**